Export of Technology

6011. SHRI V. NARAYANASAMY: Willi the PRIME MINISTER be pleased to state:

(a) whether Government's attention has been drawn to the news item appearing in 'Hindustan Times' dated 26th March, 1994 under the caption "India emerging as a big exporter of technology";

(b) if so, whether India is able to transfer indigenous technology to the USA, UK, Germany, Canada, Australia South Africa and other countries; and

(c) what is the total amount of foreign exchange Government earned by export *al* such technologies?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE AND MINISTER OF STATE IN THE DEPARTMENTS OF ATOMIC ENERGY, SPACE AND MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BHUVNESH CHATURVEDI): (a) to (c) Yes, Sir. As reported in the News Item, National Laboratories/Institutes working under the segis of CSIR have succeeded in earning around Rupees Three crores during 1993-94 by way of transfer of indigenous technologies to the USA, UK, Brazil, South Africa, etc. The technology transfer took place mainly in the areas of drugs, chemicals, cataiysts, polymers, biotechnology and equipment & machinery.

Launching of indigenonsly developed Cryogenic payload by ISRO

6012. SYED SIBTEY RAZI; Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that the Indian Space Research Organisation (ISRO) has recently launched some indigenously.developed cryogenic payload;

(b) if so, the deteils thereof with backgound behind it;

(c) whether this launching has some objectives;

(b) if so, the details thereof;

(e) whether country can lead some progressive path with this launching; and

(f) if so, the details thereof and if not, the reasons therefor?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE AND MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE IN THE DEPARTMENTS OF ATOMIC ENERGY AND SPACE (SHRI BHUVNESH CHATURVEDI): (a) and (b) Yes, Sir. The Indian Scientists from the Physical Research Laboratory (PRL), Ahmedabad of the Department of Space (DOS) have launched an indigenously developed cryosampler experiment/payload in a balloon flight from the National Bal loon Facility, Hyderabad on April 16, 1994. The balloon having a volume of 150,000m3 was sruccessfully launch ed carrying the cryogenically cooled gas sampler payload. The experiment collected air samples from pre-determined heights (during the ascent and decent) of the balloon reaching a ceiling altitude of 37km. The payload consisted of 16 samplers or probes which collect air samples under liquid neon temperatures maintained within this payload system. The development of the experiment was taken up as part of ISRO's Geos-phere-Biosphere Programme (GBP). The purpose of this development is to collect the gas samples for analysis of the trace gas concentration pro. files in the lower and middle atmosphere. These trace gases include chloroflourocabons, carbon dioxide, methane etc., which play vital role in the phenomena of ozane deple-■ tion and global warming.

(c) and (d) Yes, Sir. The balloon launching carried out in the early morning of 16th April 1994 was meant to test and qualify the pay-locd operating at very low (cryogenic) temperature and carry out laboratory analysis of air samples to collected. The measurements are to provide the concentration profiles of a large number of trace constituents over the Indian region.

(e) and (f) Yes, Sir. With the launching of the cryosampler pay-load, India has become one of the very few countries in the world to develop and successfully launch this experiment. The results obtained from the analysis of the gas samples would be helpful in making a quantitative estimate of any possible depletion of the ozone layer. The re-sults would also help in determining the extent of greenhouse warming which might ha,ve taken place and its future scenario. It is planned to conduct this balloon experiment at regular intervals so as to monitor the trace gases and to study the impact on the global warming and ozone da-pletion. While it is known that India's contribution to the anthropoge-nically produced emissions of these gases is very low but the climate Over India could be affected because of the transport of such trace constituents from other regions of the world.

Closure *of* seismological offices in Himachal Pradesh

6013. SHRI SUSHIL BARONGPA: Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that some seismological offices which were in stalled 20 years back in Himachal Pradesh have since been closed; and

(b) if so, the reasons therefor?

THE MINISTER OF STATE IN PRIME MINISTER'S OFFICE AND MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER Of, STATE IN THE DEPARTMENTS OF ATOMIC ENERGY AND SPACE (SHRI BHUVNESH CHATURVEDI): (a) and (b) No seismological observatory of the National Seismological Network has been closed. However, four out of ten special purpose seis mological cbservaiories set up in Himachal Pradesh on behalf of the Bhakra and Beas Management Board have been closed on their advice. Through the seismicity programme of Department of Science and Technology, Twelve observatories have been set up in Himachal Pradesh to supplement the observational activities of India Meteorological Depart-, ment. Also, an array of fifty strong motion accelerographs has been es-lablished in Kangra region.

12.00 NOON

Papers laid on the Table

THE MINISTER OF CIVIL AVIA-TION AND TOURISM (SHRI GHULAM NABI AZAD): I lay on the Table, under sub-section (3) of section 14-A Of the Aircraft Act, 1934, a copy (in English and Hindi) of the Ministry of Civil Aviation and Tourism Notification G.S.R. No. 117(E), dated the 25th February, 1994, publishing the Aircraft (Second Amend ment) Rules, 1994, alongwith ah Explanatory Memorandum thereon.

[Placed in Library. *See* No. LT-5754/94.]

The Deputy Chairman in the chair.

श्री सैयद सिब्ते रजी (उत्तर प्रदेश): महोदया, मैं एक महत्वपूर्ण मामला उठाना चाहता हूं . . .

उपसभापति: आज कालिंग अटेंशन है, आज के दिन जीरो अवर नहीं होगा; स्पेशल मैंशन भी नहीं होंगे, सिर्फ कालिंग